

Title (en)  
MULTILAYER FILM AND A METHOD FOR PRODUCING MULTILAYER FILM

Title (de)  
MEHRLAGIGER FILM UND VERFAHREN ZUR HERSTELLUNG DES MEHRLAGIGEN FILMS

Title (fr)  
FILM MULTICOUCHE ET PROCÉDÉ DE PRODUCTION DE FILM MULTICOUCHE

Publication  
**EP 3466685 A1 20190410 (EN)**

Application  
**EP 18020483 A 20181003**

Priority  
PL 42306917 A 20171004

Abstract (en)  
Surface protection film containing 50 - 99% of copolymers of ethylene, copolymer of propylene or a mixture thereof, consisting of layers where at least one layer is a block of thin layers, the block accounts for 15% to 80% of a total thickness of the film. In one block of thin layers there are at least 10 microlayers, preferably 10 to 100, made of high density polyethylene (HDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), ultra-low density polyethylene (ULDPE), polypropylene (PP), polyamide (PA) or copolymers. The block of thin layers may be divided into 2 or a greater number of blocks separated by intermediate layer. The microlayers may be made preferably of two different raw materials and are placed alternately. The thickness of each of the microlayers in the block ranges from 0.05 to 1.00  $\mu\text{m}$ . The film has an outer adhesive 1 - 20  $\mu\text{m}$  thick layer and the opposite outer anti-adhesive 1 - 20  $\mu\text{m}$  thick layer. The method for producing surface protection film where the film is produced in a multilayer form from the mixture of polymers containing from 50 to 99% of ethylene copolymers, propylene copolymers or their mixture, extruding from the plasticized plastic using slit head or blow moulding. The film consist of at least 1 block of thin layers, accounting for 15 to 80% of the total thickness of the film and comprising of at least 10 microlayers, each from 0.05 to 1  $\mu\text{m}$  thick, and in addition the block surface is covered with a 1 - 20  $\mu\text{m}$  thick outer adhesive layer, whereas the opposite surface with a 1 - 20  $\mu\text{m}$  thick anti-adhesive layer.

IPC 8 full level  
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Citation (search report)

- [I] WO 9409392 A1 19940428 - DOW CHEMICAL CO [US]
- [A] WO 2011146288 A1 20111124 - 3M INNOVATIVE PROPERTIES CO [US], et al
- [A] WO 2010015402 A1 20100211 - CRYOVAC INC [US], et al
- [A] WO 2017063087 A1 20170420 - MACRO TECH INC [CA]

Cited by  
CN111171745A

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Designated extension state (EPC)  
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DOCDB simple family (application)  
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